

MONTHLY NOTICES
OF THE
ROYAL ASTRONOMICAL SOCIETY

CONTAINING
PAPERS PUBLISHED IN THE PERIOD
1984 MARCH TO APRIL

VOL. 207

EDITORIAL BOARD

DR R. D. CANNON, ROYAL OBSERVATORY, EDINBURGH
PROFESSOR A. C. FABIAN, INSTITUTE OF ASTRONOMY, CAMBRIDGE
DR C. JORDAN, DEPARTMENT OF THEORETICAL PHYSICS, OXFORD
PROFESSOR B. E. J. PAGEL, ROYAL GREENWICH OBSERVATORY
DR J. R. SHAKESHAFT, MULLARD RADIO ASTRONOMY OBSERVATORY, CAMBRIDGE
DR M. G. SMITH, ROYAL OBSERVATORY, EDINBURGH
PROFESSOR R. J. TAYLER, UNIVERSITY OF SUSSEX ASTRONOMY CENTRE

Published for the Royal Astronomical Society by
Blackwell Scientific Publications
Oxford London Edinburgh Boston Palo Alto Melbourne

L
7
4
I

AUTHOR INDEX

ADAMS S., SEATON M.J., HOWARTH I.D., AURIERE M., WALSH J.R. K648, the planetary nebula in the globular cluster M15..... 471
AGRAWAL P.C.
see TARAFDAR S.P.
AITKEN D.K.
see PHILLIPS M.M.
AITKEN D.K.
see ROCHE P.F.
AITKEN D.K.
see BODE M.F.
ALLEN DAVID A. The outburst infrared continuum of A0538-66..... 45P
AURIERE M.
see ADAMS S.
AXON D.J.
see BAILEY J.
AXON DAVID J., TAYLOR KEITH Discovery of a family of Herbig-Haro objects in M42: implications for the geometry of high velocity molecular flow?..... 241
BAILEY J., HOUGH J.H., GILMOZZI R., AXON D.J. Infrared and optical polarimetry of AM Herculis..... 777
BEARD STEVEN M.
see CLOWES ROGER G.
BECK S.C., BECKWITH S.V. Star formation in the nucleus of NGC 253..... 671
BECKER R.H.
see PYE J.P.
BECKWITH S.V.
see BECK S.C.
BEDFORD D.K.
see PONMAN T.J.
BERGERON J., KUNTH D. Inferences from a study of FeII emission in radio-loud and radio-quiet quasars..... 263
BERRIMAN GRAHAM A visible and infrared study of the eclipsing dwarf nova OY Carinae - I.The visible eclipses of the central object..... 783
BERRINGTON K.A.
see KEENAN F.P.
BERTOLA F., SHARP N.A. The jet in NGC 3310..... 47
BINNEY JAMES
see GOODMAN JEREMY
BLACKMAN C.P.
see PENCE W.D.
BLACKWELL D.E., MENON S.L.R., PETFORD A.D. Measurement of relative oscillator strengths for CrI lines - I.Measures for transitions from levels a^3S_1 (0.00 eV), a^3S_1 (0.94 eV) and a^3D_{0-4} (0.96-1.03 eV)..... 533
BODE M.F., EVANS A., WHITTET D.C.B., AITKEN D.K., ROCHE P.F., WHITMORE B. Infrared photometry and spectrometry of Nova Aquilae 1982..... 897
BOND J.R., CARR B.J. Gravitational waves from a population of binary black holes. 585
BOOLER R.V.
see PEDLAR A.
BOOLER R.V.
see UNGER S.W.
BOOTH R.S.
see CHAPMAN JESSICA
BOOTH R.S.
see DIAMOND P.J.
BROWN A., FERRAZ M.C. DE M., JORDAN C. The chromosphere and corona of T Tauri..... 831
BURKE P.G.
see KEENAN F.P.
CAMPBELL C.G. Tidal effects in twin-degenerate binaries..... 433
CAMPOS L.M.B.C. On a theory of solar spicules and the atmospheric mass balance... 547
CAPUTO FILIPPINA, CASTELLANI VITTORIO The survival of galactic globular clusters. 185
CARR B.J.
see BOND J.R.
CASTELLANI VITTORIO
see CAPUTO FILIPPINA

Author Index

CHANDRASEKHAR S., LEBOVITZ NORMAN R. On the onset of relativistic instability in highly centrally condensed stars..... 13P
CHAPMAN JESSICA, COHEN R.J., NORRIS R.P., DIAMOND P.J., BOOTH R.S. MERLIN observations of the OH/IR stars OH 53.6-0.2, OH 138.0+7.2 and OH 141.7+3.5..... 149
CHARLES P.A.
see SMALE A.P.
CLOWES ROGER G., COOKE JOHN A., BEARD STEVEN M. Automated quasar detection..... 99
COHEN R.J.
see CHAPMAN JESSICA
CONDON J.J.
see HUNSTEAD R.W.
COOK M.C., WARNER B. High-speed photometry of Z Chamaleontis in the quiescent state..... 705
COOKE JOHN A.
see CLOWES ROGER G.
COSWIK RAMANATH, SARKAR SUBIR The evolution of supernova remnants as radio sources..... 745
DAVIES R.D., KINMAN T.D. Dwarf galaxies near NGC 1023..... 173
DIAMOND P.J.
see CHAPMAN JESSICA
DIAMOND P.J., NORRIS R.P., BOOTH R.S. MERLIN observations of the asymmetrical OH envelope around NML Cygnus..... 611
DISNEY M.J.
see SPARKS W.B.
DUFTON P.L.
see KEENAN F.P.
DUFTON P.L.
see JOHNSON C.
EDWARDS ALAN C. The determination and calibration of photographic stellar image profiles..... 517
EVANS A.
see BODE M.F.
FERRAZ M.C. DE M.
see BROWN A.
FREEMAN A.
see MILLAR T.J.
FREEMAN A.
see MILLAR T.J.
GILMORE GERARD New light on faint stars - VI. Structure and evolution of the Galactic spheroid..... 223
GILMOZZI R.
see BAILEY J.
GLACCUM W.
see THRONSON HARLEY A.
GOMEZ P.
see MAMPASO A.
GOODMAN JEREMY, BINNEY JAMES Adding a point mass to a spherical stellar system... 511
GRISHCHUK L.P.
see ZEL'DOVICH Y.A.B.
HABE ASAOKA
see IKEUCHI SATORU
HARPER D.A.
see THRONSON HARLEY A.
HEAVENS A.F. Upper limits for shock-accelerated particle energies..... 1P
HILL P.W., LYNAS-GRAY A.E., KILKENNY D. A search for variability in the hot hydrogen-deficient star BD+10° 2179..... 823
HOUGH J.H.
see BAILEY J.
HOWARTH I.D.
see ADAMS S.
HOWARTH IAN D., PRINJA R.K., ROCHE P.F., WILLIS A.J. IUE observations of the X-ray binary AO538-66: spectroscopic study of a strange stellar system..... 287
HUNSTEAD R.W., MURDOCH H.S., CONDON J.J., PHILLIPS M.M. A QSO with precessing jets: 2300-189..... 55
IKEUCHI SATORU, HABE ASAOKA, TANAKA YUTAKA D. The interstellar medium regulated by supernova remnants and bursts of star formation..... 909
IYE MASANORI Oscillations of rotating polytropic gas discs..... 491

Author Index

JEFFERY C.SIMON Apsidal motion in main-sequence binary stars..... 323
JENKINS C.R. The rapid stellar rotation of radio galaxies..... 361
JIANGSHENG CHEN
see SAVAGE ANN
JOHNSON C., KINGSTON A.E., DUFTON P.L. NeV abundances in planetary nebulae from infrared lines..... 7P
JORDAN C.
see BROWN A.
KAFATOS M.
see MICHALITSIANOS A.G.
KAUFMANN J.P.
see TOBIN WILLIAM
KEENAN F.P., BERRINGTON K.A., BURKE P.G., KINGSTON A.E., DUFTON P.L. Level populations for Be-sequence ions in astrophysical plasmas..... 459
KEENAN F.P., TAYAL S.S., KINGSTON A.E. MgXI line ratios in the Sun..... 51P
KENDALL DAVID G., YOUNG G.ALASTAIR Indirectional statistics and the significance of an asymmetry discovered by Birch..... 637
KILKENNY D.
see HILL P.W.
KING A.R.
see WILLIAMS G.A.
KINGSTON A.E.
see KEENAN F.P.
KINGSTON A.E.
see JOHNSON C.
KINGSTON A.E.
see KEENAN F.P.
KINMAN T.D.
see DAVIES R.D.
KNOBLOCH E., WEISS N.O. Convection in sunspots and the origin of umbral dots..... 203
KUNTH D.
see BERGERON J.
LADA CHARLES J.
see THRONSON HARLEY A.
LATTANZIO JOHN C. The effect of grain sedimentation on stellar evolution..... 309
LEBOVITZ NORMAN R.
see CHANDRASEKHAR S.
LOEWENSTEIN R.F.
see THRONSON HARLEY A.
LONGMORE A.J.
see WILLIAMS P.M.
LYNAS-GRAY A.E.
see HILL P.W.
MAMPASO A., GOMEZ P., SANCHEZ-MAGRO C., SELBY M.J. Infrared observations of HII regions: S128 and G134.2+0.8 (GL333)..... 465
MC CALL MARSHALL L. HII regions and the extinction of Cepheids in NGC 2403..... 801
MC LACHLAN A., NANDY K. Interstellar CO in the direction of the runaway star AE Aurigae..... 355
MEGGITT S.M.A., WICKRAMASINGHE D.T. An interpretation of the polarization of AM Herculis type systems..... 1
MENON S.L.R.
see BLACKWELL D.E.
MEURS E.J.A. Optical positions of active galaxies..... 883
MICHALITSIANOS A.G., KAFATOS M. Variable ultraviolet emission in SY Muscae..... 575
MIKKOLA SEppo Encounters of binaries - II.Unequal energies..... 115
MILLAR T.J., FREEMAN A. Chemical modelling of molecular sources - I.TMC-1..... 405
MILLAR T.J., FREEMAN A. Chemical modelling of molecular sources - II.L183..... 425
MORRIS SIMON
see WARD MARTIN
MOSS DAVID The decay of stellar magnetic fields..... 107
MURDOCH H.S.
see HUNSTEAD R.W.
NANDY K.
see MC LACHLAN A.
NORRIS R.P. MERLIN observations of OH maser outflows in Orion-KL..... 127
NORRIS R.P.
see CHAPMAN JESSICA

Author Index

NORRIS R.P.
see DIAMOND P.J.

PAPALOIZOU J.C.B.
see SAVONIJE G.J.

PEDLAR A., UNGER S.W., BOOLER R.V. Observations of a radio jet in the Seyfert galaxy Markarian 3..... 193

PEDLAR A.
see UNGER S.W.

PENCE W.D., BLACKMAN C.P. Dynamics of gas in barred spiral galaxies - I. NGC 6221 9

PERLEY R.A.
see WOLSTENCROFT RAMON D.

PETFORD A.D.
see BLACKWELL D.E.

PHILLIPS M.M.,AITKEN D.K., ROCHE P.F. 8-13 μ m spectrophotometry of galaxies - I. Galaxies with giant HII region nuclei..... 25

PHILLIPS M.M.
see ROCHE P.F.

PHILLIPS M.M.
see HUNSTEAD R.W.

PONMAN T.J., SKINNER G.K., BEDFORD D.K. A0538-66 in outburst: a buried neutron star?..... 621

PRINJA R.K.
see HOWARTH IAN D.

PRINJA RAMAN K. IUE ultraviolet observations of narrow absorption components in the spectrum of zeta Puppis..... 157

PYE J.P., BECKER R.H., SEWARD F.D., THOMAS N. Radio and X-ray maps of the supernova remnant W49B..... 649

ROCHE P.F.
see PHILLIPS M.M.

ROCHE P.F., AITKEN D.K., PHILLIPS M.M., WHITMORE B. 8-13 μ m spectrophotometry of galaxies - II. 10 Seyferts and 3C 273..... 35

ROCHE P.F.
see HOWARTH IAN D.

ROCHE P.F.
see BODE M.F.

RODGERS A.W.
see SPARKS W.B.

SANCHEZ-MAGRO C.
see MAMPASO A.

SARKAR SUBIR
see COSWIK RAMANATH

SAVAGE ANN, TREW ARTHUR S., JIANSHENG CHEN, WESTON TONY Optically selected QSO candidates in the field 0112-35..... 393

SAVONIJE G.J., PAPALOIZOU J.C.B. On the tidal evolution of massive X-ray binaries: the spin-up and circularization rates for systems with evolved stars and the effects of resonances..... 685

SCHUTTE BERNARD F. On secular effects in the binary pulsar..... 37P

SEATON M.J.
see ADAMS S.

SELBY M.J.
see MAMPASO A.

SEWARD F.D.
see PYE J.P.

SHARP N.A.
see BERTOLA F.

SKINNER G.K.
see PONMAN T.J.

SMALE A.P., CHARLES P.A., TUOHY I.R., THORSTENSEN J.R. Spectroscopic studies of 4U1735-44; Evidence for binary motion..... 29P

SMITH HOWARD A.
see THRONSON HARLEY A.

SMITH J.
see THRONSON HARLEY A.

SMITH M.D. Evidence for the flattening of extra-galactic jets..... 41P

SPARKS W.B., DISNEY M.J., WALL J.V., RODGERS A.W. The properties of radio ellipticals..... 445

STRELNITSKIJ V.S. On the nature of the strong cosmic H₂O masers..... 339

Author Index

TANAKA YUTAKA D.
see IKEUCHI SATORU

TARAFDAR S.P., AGRAWAL P.C. IUE observation of RS CVn-like binary sigma Corona Borealis..... 809

TAYAL S.S.
see KEENAN F.P.

TAYLOR KEITH
see AXON DAVID J.

THOMAS N.
see PYE J.P.

THORSTENSEN J.R.
see SMALE A.P.

THONRSON HARLEY A., SMITH HOWARD A., LADA CHARLES J., GLACCUM W., HARPER D.A., LOEWENSTEIN R.F., SMITH J. The energetics and mass structure of regions of star formation: S201..... 659

TOBIN WILLIAM, KAUFMANN J.P. Analysis of the three high-velocity B stars HD 125924, 165955 and CPD -72°1184..... 369

TREW ARTHUR S.
see SAVAGE ANN

TULLY R.BRENT
see WOLSTENCROFT RAMON D.

TUOHY I.R.
see SMALE A.P.

UNGER S.W.
see PEDLAR A.

UNGER S.W., BOOLER R.V., PEDLAR A. A kiloparsec radio jet in the nucleus of the SO galaxy NGC 1218 (3C 78)..... 679

WALL J.V.
see SPARKS W.B.

WALSH J.R.
see ADAMS S.

WANDEL AMRI Self-gravitation in spherically symmetric accretion..... 861

WARD MARTIN, MORRIS SIMON The reddening and high-excitation emission lines in NGC 3783..... 867

WARNER B.
see COOK M.C.

WATSON M.G.
see WILLIAMS G.A.

WEISS N.O.
see KNOBLAUCH E.

WELSH BARRY Y. IUE observations of high velocity gas towards the M16 nebula..... 167

WESTON TONY
see SAVAGE ANN

WHITEHURST R. Elliptical rings in binary systems..... 215

WHITMORE B.
see ROCHE P.F.

WHITMORE B.
see BODE M.F.

WHITTET D.C.B.
see BODE M.F.

WICKRAMASINGHE D.T.
see MEGGITT S.M.A.

WILKES BELINDA J. Studies of broad emission line profiles in QSOs - I. Observed high-resolution profiles..... 73

WILLIAMS G.A., KING A.R., WATSON M.G. The period of the intermediate polar AO Psc (=H2252-035)..... 17P

WILLIAMS P.M., LONGMORE A.J. Nova Aquilae 1982: new or pre-existing dust?..... 139

WILLIS A.J.
see HOWARTH IAN D.

WOLSTENCROFT RAMON D., TULLY R.BRENT, PERLEY R.A. VLA observations of the optical jets and nucleus of NGC 1097..... 889

YOUNG G.ALASTAIR
see KENDALL DAVID G.

ZEL'DOVICH Y.A., GRISHCHUK L.P. Structure and future of the 'new' universe..... 23P

ZHUGZHDA YU.D. Resonance oscillations in sunspots and transformation of magneto-acoustic-gravity waves..... 731

L
7
34

SUBJECT INDEX

ACCRETION AND ACCRETION DISKS

Elliptical rings in binary systems, WHITEHURST R.J.....	215
High-speed photometry of Z-Chamaeleontis in the quiescent state, COOK M.C., WARNER B.....	705
Self-gravitation in spherically symmetric accretion, WANDEL AMRI.....	861
The period of the intermediate polar AO Psc (=H2252-035), WILLIAMS G.A., KING A.R., WATSON M.G.....	17P

87

ASTROMETRY

Optical positions of active galaxies, MEURS E.J.A.....	883
--	-----

BLACK HOLES

Gravitational waves from a population of binary black holes, BOND J.R., CARR B.J.....	585
Self-gravitation in spherically symmetric accretion, WANDEL AMRI.....	861

CELESTIAL MECHANICS

Encounters of binaries - II. Unequal energies, MIKKOLA SEPPO.....	115
Elliptical rings in binary systems, WHITEHURST R.....	215
Apsidal motion in main-sequence binary stars, JEFFERY C.SIMON.....	323
Oscillations of rotating polytropic gas discs, IYE HASANORI.....	491
Adding a point mass to a spherical stellar system, GOODMAN JEREMY, BINNEY JAMES.....	511
On the tidal evolution of massive X-ray binaries: the spin-up and circularization rates for systems with evolved stars and the effects of resonances, SAVONIJE G.J., PAPALOIZOU J.C.B.....	685
Tidal effects in twin-degenerate binaries, CAMPBELL C.G.....	433

COSMIC RAYS

The evolution of supernova remnants as radio sources, COSWIK RAMANATH, SARKAR SUBIR 745	
Upper limits for shock-accelerated particle energies, HEAVENS A.F.....	1P

COSMOLOGY

Optically selected QSO candidates in the field 0112-35, SAVAGE ANN, TREW ARTHUR S., JIANSHENG CHEN, WESTON TONY.....	393
Indirectional statistics and the significance of an asymmetry discovered by Birch, KENDALL DAVID G., YOUNG G.ALASTAIR.....	637
Structure and future of the 'new' universe, ZEL'DOVICH YA.B., GRISHCHUK L.P.....	23P

DATA REDUCTION

Automated quasar detection, CLOWES ROGER G., COOKE JOHN A., BEARD STEVEN M.....	99
The determination and calibration of photographic stellar image profiles, EDWARDS ALAN C.....	517
Indirectional statistics and the significance of an asymmetry discovered by Birch, KENDALL DAVID G., YOUNG G.ALASTAIR.....	637

GALACTIC STRUCTURE AND STELLAR DYNAMICS

Dynamics of gas in barred spiral galaxies - I. NGC 6221, PENCE W.D., BLACKMAN C.P.....	9
The survival of galactic globular clusters, CAPUTO FILIPPINA, CASTELLANI VITTORIO.....	185
New light on faint stars - VI. Structure and evolution of the Galactic spheroid, GILMORE GERARD.....	223
The rapid stellar rotation of radio galaxies, JENKINS C.R.....	361
Adding a point mass to a spherical stellar system, GOODMAN JEREMY, BINNEY JAMES.....	511

GALAXIES

Dynamics of gas in barred spiral galaxies - I. NGC 6221, PENCE W.D., BLACKMAN C.P..	9
Dwarf galaxies near NGC 1023, DAVIES R.D., KINMAN T.D.....	173
HII regions and the extinction of Cepheids in NGC 2403, MCCALL MARSHALL L.....	801

GALAXIES - ACTIVE

The jet in NGC 3310, BERTOLA F., SHARP N.A.....	47
A QSO with precessing jets: 2300-189, HUNSTEAD R.W., MURDOCH H.S., CONDON J.J., PHILLIPS M.M.....	55
Observations of a radio jet in the Seyfert galaxy Markarian 3, PEDLAR A., UNGER S.W., BOOLER R.V.....	193

Subject Index

The rapid stellar rotation of radio galaxies, JENKINS C.R.....	361
The properties of radio ellipticals, SPARKS W.B., DISNEY M.J., WALL J.V., RODGERS A.W.....	445
Optical positions of active galaxies, MEURS E.J.A.....	883
VLA observations of the optical jets and nucleus of NGC 1097, WOLSTENCROFT RAMON D. TULLY R.BRENT, PERLEY R.A.....	889
Evidence for the flattening of extra-galactic jets, SMITH M.D.....	41P
 GALAXIES - FORMATION OF	
New light on faint stars - VI. Structure and evolution of the Galactic spheroid, GILMORE GERARD.....	223
 GALAXIES - NUCLEI OF	
8-13 μ m spectrophotometry of galaxies - I. Galaxies with giant HII region nuclei, PHILLIPS M.M., AITKEN D.K., ROCHE P.F.....	25
8-13 μ m spectrophotometry of galaxies - II. 10 Seyferts and 3C 273, ROCHE P.F., AITKEN D.K., PHILLIPS M.M., WHITMORE B.....	35
Star formation in the nucleus of NGC 253, BECK S.C., BECKWITH S.V.....	671
A kiloparsec radio jet in the nucleus of the S0 galaxy NGC 1218 (3C 78), UNGER S.W. BOOLER R.V., PEDLAR A.....	679
 GALAXIES - SEYFERT	
8-13 μ m spectrophotometry of galaxies - II. 10 Seyferts and 3C 273, ROCHE P.F., AITKEN D.K., PHILLIPS M.M., WHITMORE B.....	35
Observations of a radio jet in the Seyfert galaxy Markarian 3, PEDLAR A., UNGER S.W., BOOLER R.V.....	193
The reddening and high-excitation emission lines in NGC 3783, WARD MARTIN, MORRIS SIMON.....	867
 GRAVITATION AND GRAVITATIONAL RADIATION	
Gravitational waves from a population of binary black holes, BOND J.R., CARR B.J... 585	
 HERBIG-HARO OBJECTS	
Discovery of a family of Herbig-Haro objects in M42: implications for the geometry of high velocity molecular flow?, AXON DAVID J., TAYLOR KEITH.....	241
 INFRARED ASTRONOMY	
8-13 μ m spectrophotometry of galaxies - I. Galaxies with giant HII region nuclei, PHILLIPS M.M., AITKEN D.K., ROCHE P.F.....	25
8-13 μ m spectrophotometry of galaxies - II. 10 Seyferts and 3C 273, ROCHE P.F., AITKEN D.K., PHILLIPS M.M., WHITMORE B.....	35
Nova Aquilae 1982: new or pre-existing dust?, WILLIAMS P.M., LONGMORE A.J.....	139
Infrared observations of HII regions: S128 and G134.2+0.8 (GL333), MAMPASO A., GOMEZ P., SANCHEZ-MAGRO C., SELBY M.J.....	465
The energetics and mass structure of regions of star formation: S201, THRONSON HARLEY A., SMITH HOWARD A., LADA CHARLES J., GLACCUM W., HARPER D.A., LOEWENSTEIN R.F., SMITH J.....	659
Star formation in the nucleus of NGC 253, BECK S.C., BECKWITH S.V.....	671
Infrared and optical polarimetry of AM Herculis, BAILEY J., HOUGH J.H., GILMOZZI R. AXON D.J.....	777
A visible and infrared study of the eclipsing dwarf nova OY Carinae - I. The visible eclipses of the central object, BERRIMAN GRAHAM.....	783
Infrared photometry and spectrometry of Nova Aquilae 1982, BODE M.F., EVANS A., WHITTET D.C.B., AITKEN D.K., ROCHE P.F., WHITMORE B.....	897
NeV abundances in planetary nebulae from infrared lines, JOHNSON C., KINGSTON A.E., DUNTON P.L.....	7P
The outburst infrared continuum of A0538-66, ALLEN DAVID A.....	45P
 INSTRUMENTS AND TECHNIQUES	
Automated quasar detection, CLOWES ROGER G., COOKE JOHN A., BEARD STEVEN M.....	99
The determination and calibration of photographic stellar image profiles, EDWARDS ALAN C.....	517
 INTERSTELLAR GRAINS	
8-13 μ m spectrophotometry of galaxies - I. Galaxies with giant HII region nuclei, PHILLIPS M.M., AITKEN D.K., ROCHE P.F.....	25
Nova Aquilae 1982: new or pre-existing dust?, WILLIAMS P.M., LONGMORE A.J.....	139

Subject Index

The effect of grain sedimentation on stellar evolution, LATTANZIO JOHN C.....	309
Chemical modelling of molecular sources - II.L183, MILLAR T.J., FREEMAN A.....	425
The energetics and mass structure of regions of star formation: S201, THRONSON HARLEY A., SMITH HOWARD A., LADA CHARLES J., GLACCUM W., HARPER D.A., LOEWENSTEIN R.F., SMITH J.....	659
HII regions and the extinction of Cepheids in NGC 2403, MCCALL MARSHALL L.....	801
Infrared photometry and spectrometry of Nova Aquilae 1982, BODE M.F., EVANS A., WHITTET D.C.B., AITKEN D.K., ROCHE P.F., WHITMORE B.....	897
 INTERSTELLAR MEDIUM	
Dynamics of gas in barred spiral galaxies - I. NGC 6221, PENCE W.D., BLACKMAN C.P.. 9	
Interstellar CO in the direction of the runaway star AE Aurigae, MCLACHLAN A., NANDY K.....	355
Chemical modelling of molecular sources - I.TMC-1, MILLAR T.J., FREEMAN A.....	405
The interstellar medium regulated by supernova remnants and bursts of star formation, IKEUCHI SATORU, HABE ASAOS, TANAKA YUTAKA D.....	909
 MASERS	
MERLIN observations of OH maser outflows in Orion-KL, NORRIS R.P.....	127
MERLIN observations of the OH/IR stars OH 53.6-0.2, OH 138.0+7.2 and OH 141.7+3.5, CHAPMAN JESSICA, COHEN R.J., NORRIS R.P., DIAMOND P.J., BOOTH R.S.....	149
On the nature of the strong cosmic H ₂ O masers, STRELNITSKIJ V.S.....	339
MERLIN observations of the asymmetrical OH envelope around NML Cygnus, DIAMOND P.J. NORRIS R.P., BOOTH R.S.....	611
 MOLECULES	
IUE observations of high velocity gas towards the M16 nebula, WELSH BARRY Y.....	167
Discovery of a family of Herbig-Haro objects in M42: implications for the geometry of high velocity molecular flow?, AXON DAVID J., TAYLOR KEITH.....	281
On the nature of the strong cosmic H ₂ O masers, STRELNITSKIJ V.S.....	339
Interstellar CO in the direction of the runaway star AE Aurigae, MCLACHLAN A., NANDY K.....	355
Chemical modelling of molecular sources - I.TMC-1, MILLAR T.J., FREEMAN A.....	405
Chemical modelling of molecular sources - II.L183, MILLAR T.J., FREEMAN A.....	425
The energetics and mass structure of regions of star formation: S201, THRONSON HARLEY A., SMITH HOWARD A., LADA CHARLES J., GLACCUM W., HARPER D.A., LOEWENSTEIN R.F., SMITH J.....	659
 NEBULAE - GASEOUS	
8-13 μ m spectrophotometry of galaxies - I.Galaxies with giant HII region nuclei, PHILLIPS M.M., AITKEN D.K., ROCHE P.F.....	25
MERLIN observations of OH maser outflows in Orion-KL, NORRIS R.P.....	127
IUE observations of high velocity gas towards the M16 nebula, WELSH BARRY Y.....	167
Chemical modelling of molecular sources - I.TMC-1, MILLAR T.J., FREEMAN A.....	405
Chemical modelling of molecular sources - II.L183, MILLAR T.J., FREEMAN A.....	425
Infrared observations of HII regions: S128 and G134.2+0.8 (GL333), MAMPASO A., GOMEZ P., SANCHEZ-MAGRO C., SELBY M.J.....	465
The energetics and mass structure of regions of star formation: S201, THRONSON HARLEY A., SMITH HOWARD A., LADA CHARLES J., GLACCUM W., HARPER D.A., LOEWENSTEIN R.F., SMITH J.....	659
The interstellar medium regulated by supernova remnants and bursts of star formation, IKEUCHI SATORU, HABE ASAOS, TANAKA YUTAKA D.....	909
 NEBULAE - PLANETARY	
K648, the planetary nebula in the globular cluster M15, ADAMS S., SEATON M.J., HOWARTH I.D., AURIERE M., WALSH J.R.....	471
NeV abundances in planetary nebulae from infrared lines, JOHNSON C., KINGSTON A.E., DUFTON P.L.....	7P
 NEUTRON STARS	
A0538-66 in outburst: a buried neutron star?, PONMAN T.J., SKINNER G.K., BEDFORD D.K.....	621
 NOVAE	
Nova Aquilae 1982: new or pre-existing dust?, WILLIAMS P.M., LONGMORE A.J.....	139
Infrared photometry and spectrometry of Nova Aquilae 1982, BODE M.F., EVANS A., WHITTET D.C.B., AITKEN D.K., ROCHE P.F., WHITMORE B.....	897

Subject Index

PHOTOMETRY - NON-STELLAR	
Dwarf galaxies near NGC 1023, DAVIES R.D., KINMAN T.D.....	173
The reddening and high-excitation emission lines in NGC 3783, WARD MARTIN, MORRIS SIMON.....	867
PHYSICAL PROCESSES	
The decay of stellar magnetic fields, MOSS DAVID.....	107
Convection in sunspots and the origin of umbral dots, KNOBLOCH E., WEISS N.O.....	203
On the nature of the strong cosmic H ₂ O masers, STRELNITSKIJ V.S.....	339
On a theory of solar spicules and the atmospheric mass balance, CAMPOS L.M.B.C.....	547
Resonance oscillations in sunspots and transformation of magneto-acoustic-gravity waves, ZHUGZHDA YU.D.....	731
The evolution of supernova remnants as radio sources, COSWIK RAMANATH, SARKAR SUBIR	745
Upper limits for shock-accelerated particle energies, HEAVENS A.F.....	1P
On the onset of relativistic instability in highly centrally condensed stars, CHANDRASEKHAR S., LEBOVITZ NORMAN R.....	13P
Evidence for the flattening of extra-galactic jets, SMITH M.D.....	41P
POLARIZATION OF STARLIGHT	
An interpretation of the polarization of AM Herculis type systems, MEGGITT S.M.A., WICKRAMASINGHE D.T.....	1
Infrared and optical polarimetry of AM Herculis, BAILEY J., HOUGH J.H., GILMOZZI R., AXON D.J.....	777
PULSARS	
On secular effects in the binary pulsar, SCHUTZ BERNARD F.....	37P
QUASARS	
A QSO with precessing jets: 2300-189, HUNSTEAD R.W., MURDOCH H.S., CONDON J.J., PHILLIPS M.M.....	55
Studies of broad emission line profiles in QSOs - I. Observed high-resolution profiles, WILKES BELINDA J.....	73
Automated quasar detection, CLOWES ROGER G., COOKE JOHN A., BEARD STEVEN M.....	99
Inferences from a study of FeII emission in radio-loud and radio-quiet quasars, BERGERON J., KUNTH D.....	263
Optically selected QSO candidates in the field 0112-35, SAVAGE ANN, TREW ARTHUR S., JIANSHENG CHEN, WESTON TONY.....	393
Self-gravitation in spherically symmetric accretion, WANDEL AMRI.....	861
RADIO ASTRONOMY	
A QSO with precessing jets: 2300-189, HUNSTEAD R.W., MURDOCH H.S., CONDON J.J., PHILLIPS M.M.....	55
MERLIN observations of OH maser outflows in Orion-KL, NORRIS R.P.....	127
MERLIN observations of the OH/IR stars OH 53.6-0.2, OH 138.0-7.2 and OH 141.7+3.5, CHAPMAN JESSICA, COHEN R.J., NORRIS R.P., DIAMOND P.J., BOOTH R.S.....	149
Dwarf galaxies near NGC 1023, DAVIES R.D., KINMAN T.D.....	173
Observations of a radio jet in the Seyfert galaxy Markarian 3, PEDLAR A., UNGER S.W., BOOLER R.V.....	193
Inferences from a study of FeII emission in radio-loud and radio-quiet quasars, BERGERON J., KUNTH D.....	263
The rapid stellar rotation of radio galaxies, JENKINS C.R.....	361
The properties of radio ellipticals, SPARKS W.B., DISNEY M.J., WALL J.V., RODGERS A.W.....	445
MERLIN observations of the asymmetrical OH envelope around NML Cygnus, DIAMOND P.J. NORRIS R.P., BOOTH R.S.....	611
Indirectional statistics and the significance of an asymmetry discovered by Birch, KENDALL DAVID G., YOUNG G.ALASTAIR.....	637
Radio and X-ray maps of the supernova remnant W49B, PYE J.P., BECKER R.H., SEWARD F.D., THOMAS N.....	649
A kiloparsec radio jet in the nucleus of the S0 galaxy NGC 1218 (3C 78), UNGER S.W. BOOLER R.V., PEDLAR A.....	679
The evolution of supernova remnants as radio sources, COSWIK RAMANATH, SARKAR SUBIR	745
Optical positions of active galaxies, MEURS E.J.A.....	883
VLA observations of the optical jets and nucleus of NGC 1097, WOLSTENCROFT RAMON D. TULLY R.BRENT, PERLEY R.A.....	889

Subject Index

RELATIVITY

On the onset of relativistic instability in highly centrally condensed stars, CHANDRASEKHAR S., LEBOVITZ NORMAN R..... 13P
On secular effects in the binary pulsar, SCHUTZ BERNARD F..... 37P

SPECTROSCOPY

Studies of broad emission line profiles in QSOs - I. Observed high-resolution profiles, WILKES BELINDA J..... 73
Level populations for Be-sequence ions in astrophysical plasmas, KEENAN F.P., BERRINGTON K.A., BURKE P.G., KINGSTON A.E., DUFTON P.L..... 459
Measurement of relative oscillator strengths for CrI lines - I. Measures for transitions from levels a^7S_3 (0.00 eV), a^5S_1 (0.94 eV) and a^5D_{0-4} (0.96-1.03 eV), BLACKWELL D.E., MENON S.L.R., PETFORD A.D..... 533
NeV abundances in planetary nebulae from infrared lines, JOHNSON C., KINGSTON A.E., DUFTON P.L..... 7P
MgXI line ratios in the Sun, KEENAN F.P., TAYAL S.S., KINGSTON A.E..... 51P

STARS - ATMOSPHERES OF

On a theory of solar spicules and the atmospheric mass balance, CAMPOS L.M.B.C..... 547
Resonance oscillations in sunspots and transformation of magneto-acoustic-gravity waves, ZHUGZHDA YU.D..... 731
The chromosphere and corona of T Tauri, BROWN A., FERRAZ M.C.DE M., JORDAN C..... 831

STARS - BINARY

Encounters of binaries - II. Unequal energies, MIKKOLA SEppo..... 115
IUE observations of the X-ray binary AO538-66: spectroscopic study of a strange stellar system, HOWARTH IAN D., PRINJA R.K., ROCHE P.F., WILLIS A.J..... 287
Apsidal motion in main-sequence binary stars, JEFFERY C.SIMON..... 323
Tidal effects in twin-degenerate binaries, CAMPBELL C.G..... 433
Gravitational waves from a population of binary black holes, BOND J.R., CARR B.J..... 585
AO538-66 in outburst: a buried neutron star?, PONMAN T.J., SKINNER G.K., BEDFORD D.K..... 621
On the tidal evolution of massive X-ray binaries: the spin-up and circularization rates for systems with evolved stars and the effects of resonances, SAVONIJE G.J., PAPALOIZOU J.C.B..... 685
High-speed photometry of Z Chamaeleontis in the quiescent state, COOK M.C., WARNER B..... 705
A visible and infrared study of the eclipsing dwarf nova OY Carinae - I. The visible eclipses of the central object, BERRIMAN GRAHAM..... 783
IUE observation of RS CVn-like binary sigma Corona Borealis, TARAFDAR S.P., AGRAWAL P.C..... 809
The period of the intermediate polar AO Psc (=H2252-035), WILLIAMS G.A., KING A.R., WATSON M.G..... 17P
Spectroscopic studies of 401735-44; Evidence for binary motion, SMALE A.P., CHARLES P.A., TUOHY I.R., THORSTENSEN J.R..... 29P
On secular effects in the binary pulsar, SCHUTZ BERNARD F..... 37P

STARS - CLUSTERS OF

The survival of galactic globular clusters, CAPUTO FILIPPINA, CASTELLANI VITTORIO.. 185
K648, the planetary nebula in the globular cluster M15, ADAMS S., SEATON M.J., HOWARTH I.D., AURIERE M., WALSH J.R..... 471

STARS - FORMATION OF

MERLIN observations of OH maser outflows in Orion-KL, NORRIS R.P..... 127
Infrared observations of HII regions: S128 and G134.2+0.8 (GL333), MAMPASO A., GOMEZ P., SANCHEZ-MAGRO C., SELBY M.J..... 465
Star formation in the nucleus of NGC 253, BECK S.C., BECKWITH S.V..... 671
The interstellar medium regulated by supernova remnants and bursts of star formation, IKEUCHI SATORU, HABE ASAOKA, TANAKA YUTAKA D..... 909

STARS - MAGNETIC FIELDS IN

An interpretation of the polarization of AM Herculis type systems, MEGGITT S.M.A., WICKRAMASINGHE D.T..... 1
The decay of stellar magnetic fields, MOSS DAVID..... 107
Convection in sunspots and the origin of umbral dots, KNOBLOCH E., WEISS N.O..... 203
Infrared and optical polarimetry of AM Herculis, BAILEY J., HOUGH J.H., GILMOZZI R., AXON D.J..... 777

Subject Index

PHOTOMETRY - NON-STELLAR	
Dwarf galaxies near NGC 1023, DAVIES R.D., KINMAN T.D.....	173
The reddening and high-excitation emission lines in NGC 3783, WARD MARTIN, MORRIS SIMON.....	867
PHYSICAL PROCESSES	
The decay of stellar magnetic fields, MOSS DAVID.....	107
Convection in sunspots and the origin of umbral dots, KNOBLOCH E., WEISS N.O.....	203
On the nature of the strong cosmic H ₂ O masers, STRELNITSKIJ V.S.....	339
On a theory of solar spicules and the atmospheric mass balance, CAMPOS L.M.B.C.....	547
Resonance oscillations in sunspots and transformation of magneto-acoustic-gravity waves, ZHUGZHDA YU.D.....	731
The evolution of supernova remnants as radio sources, COSWIK RAMANATH, SARKAR SUBIR.....	745
Upper limits for shock-accelerated particle energies, HEAVENS A.F.....	1P
On the onset of relativistic instability in highly centrally condensed stars, CHANDRASEKHAR S., LEBOVITZ NORMAN R.....	13P
Evidence for the flattening of extra-galactic jets, SMITH M.D.....	41P
POLARIZATION OF STARLIGHT	
An interpretation of the polarization of AM Herculis type systems, MEGGITT S.M.A., WICKRAMASINGHE D.T.....	1
Infrared and optical polarimetry of AM Herculis, BAILEY J., HOUGH J.H., GILMOZZI R., AXON D.J.....	777
PULSARS	
On secular effects in the binary pulsar, SCHUTZ BERNARD F.....	37P
QUASARS	
A QSO with precessing jets: 2300-189, HUNSTEAD R.W., MURDOCH H.S., CONDON J.J., PHILLIPS M.M.....	55
Studies of broad emission line profiles in QSOs - I. Observed high-resolution profiles, WILKES BELINDA J.....	73
Automated quasar detection, CLOWES ROGER G., COOKE JOHN A., BEARD STEVEN M.....	99
Inferences from a study of FeII emission in radio-loud and radio-quiet quasars, BERGERON J., KUNTH D.....	263
Optically selected QSO candidates in the field 0112-35, SAVAGE ANN, TREW ARTHUR S., JIANSHENG CHEN, WESTON TONY.....	393
Self-gravitation in spherically symmetric accretion, WANDEL AMRI.....	861
RADIO ASTRONOMY	
A QSO with precessing jets: 2300-189, HUNSTEAD R.W., MURDOCH H.S., CONDON J.J., PHILLIPS M.M.....	55
MERLIN observations of OH maser outflows in Orion-KL, NORRIS R.P.....	127
MERLIN observations of the OH/IR stars OH 53.6-0.2, OH 138.0+7.2 and OH 141.7+3.5, CHAPMAN JESSICA, COHEN R.J., NORRIS R.P., DIAMOND P.J., BOOTH R.S.....	149
Dwarf galaxies near NGC 1023, DAVIES R.D., KINMAN T.D.....	173
Observations of a radio jet in the Seyfert galaxy Markarian 3, PEDLAR A., UNGER S.W., BOOLER R.V.....	193
Inferences from a study of FeII emission in radio-loud and radio-quiet quasars, BERGERON J., KUNTH D.....	263
The rapid stellar rotation of radio galaxies, JENKINS C.R.....	361
The properties of radio ellipticals, SPARKS W.B., DISNEY M.J., WALL J.V., RODGERS A.W.....	445
MERLIN observations of the asymmetrical OH envelope around NML Cygnus, DIAMOND P.J., NORRIS R.P., BOOTH R.S.....	611
Indirectional statistics and the significance of an asymmetry discovered by Birch, KENDALL DAVID G., YOUNG G.ALASTAIR.....	637
Radio and X-ray maps of the supernova remnant W49B, PYE J.P., BECKER R.H., SEWARD F.D., THOMAS N.....	649
A kiloparsec radio jet in the nucleus of the S0 galaxy NGC 1218 (3C 78), UNGER S.W., BOOLER R.V., PEDLAR A.....	679
The evolution of supernova remnants as radio sources, COSWIK RAMANATH, SARKAR SUBIR	745
Optical positions of active galaxies, MEURS E.J.A.....	883
VLA observations of the optical jets and nucleus of NGC 1097, WOLSTENCROFT RAMON D., TULLY R.BRENT, PERLEY R.A.....	889

Subject Index

RELATIVITY

On the onset of relativistic instability in highly centrally condensed stars, CHANDRASEKHAR S., LEOVITZ NORMAN R..... 13P
On secular effects in the binary pulsar, SCHUTZ BERNARD F..... 37P

SPECTROSCOPY

Studies of broad emission line profiles in QSOs - I. Observed high-resolution profiles, WILKES BELINDA J..... 73
Level populations for Be-sequence ions in astrophysical plasmas, KEENAN F.P., BERRINGTON K.A., BURKE P.G., KINGSTON A.E., DUNTON P.L..... 459
Measurement of relative oscillator strengths for CrI lines - I. Measures for transitions from levels a^7S_3 (0.00 eV), a^5S_1 (0.94 eV) and a^5D_{0-4} (0.96-1.03 eV), BLACKWELL D.E., MENON S.L.R., PETFORD A.D..... 533
NeV abundances in planetary nebulae from infrared lines, JOHNSON C., KINGSTON A.E., DUNTON P.L..... 7P
MgII line ratios in the Sun, KEENAN F.P., TAYAL S.S., KINGSTON A.E..... 51P

STARS - ATMOSPHERES OF

On a theory of solar spicules and the atmospheric mass balance, CAMPOS L.M.B.C..... 547
Resonance oscillations in sunspots and transformation of magneto-acoustic-gravity waves, ZHUGZHDA YU.D..... 731
The chromosphere and corona of T Tauri, BROWN A., FERRAZ M.C.D. M., JORDAN C..... 831

STARS - BINARY

Encounters of binaries - II. Unequal energies, MIKKOLA SEppo..... 115
IUE observations of the X-ray binary A0538-66: spectroscopic study of a strange stellar system, HOWARTH IAN D., PRINJA R.K., ROCHE P.F., WILLIS A.J..... 287
Apsidal motion in main-sequence binary stars, JEFFERY C.SIMON..... 323
Tidal effects in twin-degenerate binaries, CAMPBELL C.G..... 433
Gravitational waves from a population of binary black holes, BOND J.R., CARR B.J... 585
A0538-66 in outburst: a buried neutron star?, PONMAN T.J., SKINNER G.K., BEDFORD D.K..... 621
On the tidal evolution of massive X-ray binaries: the spin-up and circularization rates for systems with evolved stars and the effects of resonances, SAVONIJE G.J., PAPALOIZOU J.C.B..... 685
High-speed photometry of Z Chamaeleontis in the quiescent state, COOK M.C., WARNER B..... 705
A visible and infrared study of the eclipsing dwarf nova OY Carinae - I. The visible eclipses of the central object, BERRIMAN GRAHAM..... 783
IUE observation of RS CVn-like binary sigma Corona Borealis, TARAFDAR S.P., AGRAWAL P.C..... 809
The period of the intermediate polar AO Psc (=H2252-035), WILLIAMS G.A., KING A.R., WATSON M.G..... 17P
Spectroscopic studies of HU1735-44: Evidence for binary motion, SMALE A.P., CHARLES P.A., TUOHY I.R., THORSTENSEN J.R..... 29P
On secular effects in the binary pulsar, SCHUTZ BERNARD F..... 37P

STARS - CLUSTERS OF

The survival of galactic globular clusters, CAPUTO FILIPPINA, CASTELLANI VITTORIO.. 185
K648, the planetary nebula in the globular cluster M15, ADAMS S., SEATON M.J., HOWARTH I.D., AURIERE M., WALSH J.R..... 471

STARS - FORMATION OF

MERLIN observations of OH maser outflows in Orion-KL, NORRIS R.P..... 127
Infrared observations of HII regions: S128 and G134.2+0.8 (GL333), MAMPASO A., GOMEZ P., SANCHEZ-MAGRO C., SELBY M.J..... 465
Star formation in the nucleus of NGC 253, BECK S.C., BECKWITH S.V..... 671
The interstellar medium regulated by supernova remnants and bursts of star formation, IKEUCHI SATORU, HABE ASAO, TANAKA YUTAKA D..... 909

STARS - MAGNETIC FIELDS IN

An interpretation of the polarization of AM Herculis type systems, MEGGITT S.M.A., WICKRAMASINGHE D.T..... 1
The decay of stellar magnetic fields, MOSS DAVID..... 107
Convection in sunspots and the origin of umbral dots, KNOBLOCH E., WEISS N.O..... 203
Infrared and optical polarimetry of AM Herculis, BAILEY J., HOUGH J.H., GILMOZZI R., AXON D.J..... 777

Subject Index

STARS - MASS LOSS FROM	
MERLIN observations of the OH/IR stars OH 53.6-0.2, OH 138.0+7.2 and OH 141.7+3.5, CHAPMAN JESSICA, COHEN R.J., NORRIS R.P., DIAMOND P.J., BOOTH R.S.....	149
IUE ultraviolet observations of narrow absorption components in the spectrum of zeta Puppis, PRINJA RAMAN K.....	157
IUE observations of high velocity gas towards the M16 nebula, WELSH BARRY Y.....	167
Discovery of a family of Herbig-Haro objects in M42: implications for the geometry of high velocity molecular flow?, AXON DAVID J., TAYLOR KEITH.....	241
On the nature of the strong cosmic H ₂ O masers, STRELNITSKIJ V.S.....	339
MERLIN observations of the asymmetrical OH envelope around NML Cygnus, DIAMOND P.J., NORRIS R.P., BOOTH R.S.....	611
STARS - PHOTOMETRY OF	
K648, the planetary nebula in the globular cluster M15, ADAMS S., SEATON M.J., HOWARTH I.D., AURIERE M., WALSH J.R.....	471
The determination and calibration of photographic stellar image profiles, EDWARDS ALAN C.....	517
High-speed photometry of Z Chamaeleontis in the quiescent state, COOK M.C., WARNER B.....	705
A visible and infrared study of the eclipsing dwarf nova OY Carinae - I.The visible eclipses of the central object, BERRIMAN GRAHAM.....	783
HII regions and the extinction of Cepheids in NGC 2403, MCCALL MARSHALL L.....	801
A search for variability in the hot hydrogen-deficient star BD+10°2179, HILL P.W., LYNAS-GRAY A.E., KILKENNY D.....	823
The period of the intermediate polar AO Psc (=H2252-035), WILLIAMS G.A., KING A.R., WATSON M.G.....	17P
The outburst infrared continuum of AO538-66, ALLEN DAVID A.....	45P
STARS - SPECTROSCOPY OF	
IUE ultraviolet observations of narrow absorption components in the spectrum of zeta Puppis, PRINJA RAMAN K.....	157
Analysis of the three high-velocity B stars HD 125924, 165955 and CPD -72°1184, TOBIN WILLIAM, KAUFMANN J.P.....	369
Variable ultraviolet emission in SY Muscae, MICHALITSIANOS A.G., KAFATOS M.....	575
IUE observation of RS CVn-like binary sigma Corona Borealis, TARAFDAR S.P., AGRAWAL P.C.....	809
A search for variability in the hot hydrogen-deficient star BD+10°2179, HILL P.W., LYNAS-GRAY A.E., KILKENNY D.....	823
The chromosphere and corona of T Tauri, BROWN A., FERRAZ M.C.D. M., JORDAN C.....	831
Spectroscopic studies of 4U1735-44; Evidence for binary motion, SMALE A.P., CHARLES P.A., TUOHY I.R., THORSTENSEN J.R.....	29P
STARS - STRUCTURE AND EVOLUTION OF	
The effect of grain sedimentation on stellar evolution, LATTANZIO JOHN C.....	309
On the onset of relativistic instability in highly centrally condensed stars, CHANDRASEKHAR S., LEBOVITZ NORMAN R.....	13P
STARS - VARIABLE	
An interpretation of the polarization of AM Herculis type systems, MEGGITT S.M.A., WICKRAMASINGHE D.T.....	1
Elliptical rings in binary systems, WHITEHURST R.....	215
IUE observations of the X-ray binary AO538-66: spectroscopic study of a strange stellar system, HOWARTH IAN D., PRINJA R.K., ROCHE P.F., WILLIS A.J.....	287
Variable ultraviolet emission in SY Muscae, MICHALITSIANOS A.G., KAFATOS M.....	575
AO538-66 in outburst: a buried neutron star?, PONMAN T.J., SKINNER G.K., BEDFORD D.K.....	621
High-speed photometry of Z Chamaeleontis in the quiescent state, COOK M.C., WARNER B.....	705
A visible and infrared study of the eclipsing dwarf nova OY Carinae - I.The visible eclipses of the central object, BERRIMAN GRAHAM.....	783
HII regions and the extinction of Cepheids in NGC 2403, MCCALL MARSHALL L.....	801
A search for variability in the hot hydrogen-deficient star BD+10°2179, HILL P.W., LYNAS-GRAY A.E., KILKENNY D.....	823
Spectroscopic studies of 4U1735-44; Evidence for binary motion, SMALE A.P., CHARLES P.A., TUOHY I.R., THORSTENSEN J.R.....	29P
The outburst infrared continuum of AO538-66, ALLEN DAVID A.....	45P

Subject Index

STARS - VELOCITIES OF

Analysis of the three high-velocity B stars HD 125924, 165955 and CPD -72° 1184, TOBIN WILLIAM, KAUFMANN J.P..... 369

SUN

Convection in sunspots and the origin of umbral dots, KNOBLOCH E., WEISS N.O..... 203
On a theory of solar spicules and the atmospheric mass balance, CAMPOS L.M.B.C..... 547
Resonance oscillations in sunspots and transformation of magneto-acoustic-gravity waves, ZHUGZHDA YU.D..... 731
MgXI line ratios in the Sun, KEENAN F.P., TAYAL S.S., KINGSTON A.E..... 51P

SUPERNOVAE AND SUPERNOVA REMNANTS

Radio and X-ray maps of the supernova remnant W49B, PYE J.P., BECKER R.H., SEWARD F.D., THOMAS N..... 649
The evolution of supernova remnants as radio sources, COSWIK RAMANATH, SARKAR SUBIR 745
The interstellar medium regulated by supernova remnants and bursts of star formation, IKEUCHI SATORU, HABE ASAO, TANAKA YUTAKA D..... 909
Upper limits for shock-accelerated particle energies, HEAVENS A.F..... 1P

ULTRAVIOLET ASTRONOMY

IUE observations of high velocity gas towards the M16 nebula, WELSH BARRY Y..... 167
IUE observations of the X-ray binary A0538-66: spectroscopic study of a strange stellar system, HOWARTH IAN D., PRINJA R.K., ROCHE P.F., WILLIS A.J..... 287
Interstellar CO in the direction of the runaway star AE Aurigae, MCLACHLAN A., NANDY K..... 355
Analysis of the three high-velocity B stars HD 125924, 165955 and CPD -72° 1184, TOBIN WILLIAM, KAUFMANN J.P..... 369
K648, the planetary nebula in the globular cluster M15, ADAMS S., SEATON M.J., HOWARTH I.D., AURIERE M., WALSH J.R..... 471
Variable ultraviolet emission in SY Muscae, MICHALITSIANOS A.G., KAFATOS M..... 575
IUE observation of RS CVn-like binary sigma Corona Borealis, TARAFDAR S.P., AGRAWAL P.C..... 809
The chromosphere and corona of T Tauri, BROWN A., FERRAZ M.C.D. M., JORDAN C..... 831
IUE ultraviolet observations of narrow absorption components in the spectrum of zeta Puppis, PRINJA RAMAN K..... 157

X-RAY ASTRONOMY

A0538-66 in outburst: a buried neutron star?, PONMAN T.J., SKINNER G.K., BEDFORD D.K..... 621
Radio and X-ray maps of the supernova remnant W49B, PYE J.P., BECKER R.H., SEWARD F.D., THOMAS N..... 649
Spectroscopic studies of 4U1735-44; Evidence for binary motion, SNALE A.P., CHARLES P.A., TUOHY I.R., THORSTENSEN J.R..... 29P
The outburst infrared continuum of A0538-66, ALLEN DAVID A..... 45P